KARTASHOV, V.I., inzhener; KRONKALN, L.A., kandidat tekhnicheskikh nauk;
TSKIPURISHVILI, V.B., kandidat tekhnicheskikh nauk; SIDOROV, N.I.,
inzhener, redaktor; YUDZON, D.M., tekhnicheskiy redaktor

[Problems in increasing the runs of electric locomotives between
repairs; on the basis of progressive practices of electric locomotive
machinists and repairmen in shops and plants] Voprosy uvelicheniia
mezhremontnykh probegov elektrovozov; na osnove peredovogo opyta
elektrovoznykh mashinistov-tiazhelovesnikov i rabotnikov remontnykh
tsekhov depo i zavodov. Moskva, Gos. transp.zhel-dor. izd-vo, 1956.
90 p.   (MLRA 10:1)
        (Electric locomotives)

KARTASHEV, V.I.; SUKHOPUDSKIY, N.D.; SHIRYAYEV, A.P., inzhener; STIKHNO, T.V., tekhnicheskiy redaktor.

[Insulating and testing d.c. traction engines for rolling stock] Izoliatsiia mashin elektropodvizhnogo sostava postoiannogo toka i ee ispytaniia. Moskva, Gos.transp.zhel-dor.izd-vo 1956. 106 p. (Moscow, Vsesoiuznyi nauchno-issledovatel'skii institut zhelezno-dorozhnogo transporta. Trudy, no.128)   (MIRA 10:1)
        (Electric locomotives) (Insulating materials)

KARTASHEV, V.I.,inzh.; TIKHMENEV, B.N.,inzh.; TREYVAS, M.D.,kand.tekhn.nauk

Choosing a suitable voltage for an a.c. electric traction system.
Elek. i tepl. tiaga 2 no.2:1-5 F '58.   (MIRA 11:4)
(Electric railroads)

L 33148-65

ACCESSION NR: AT5005506   S/0000/64/000/000/0045/0051

AUTHOR: Kartashev, V. I.

TITLE: Automatic encoding of the states of an automaton

SOURCE: AN UkrSSR. Institut kibernetiki. Kibernetika i tekhnika vychisleniy (Cybernetics and computer engineering). Kiev, Naukova dumka, 1964, 45-51

TOPIC TAGS: automatic coding, automaton, digital computer, computer algorithm, adjacent code

ABSTRACT: This article is a continuation of the author's previous work (pp. 32-44 of this volume), only now a practical realization of the previously derived algorithm for encoding of the adjacent states of an automaton by means of adjacent codes is described. The algorithm was realized on a triple-address digital computer, whose operational memory consisted of 4096 elements of 45 digits each. The program allowed automatic encoding of an automaton with up to 256 states, when each state is adjacent to no more than 8 other states. In practice, this includes all contemporary automata. The memory is divided into a number of tables. The table of connections accommodates all initial information and uses 768 elements. The main coding table has 256 elements and stores selected 32-digit codes for each state of

Card 1/2

L 33148-65

ACCESSION NR: AT5005506

the automaton. All remaining variations of these codes are stored in an auxiliary table which consists of 1792 elements. The operational memory also contains a table of variants in which 2^n (n = number of digits in the code) possible coding combinations are stored in the order of ascending weight. This table has 256 elements. Moreover, 100 elements are used to store intermediate results and 200 elements are used for a table of constants. The encoding algorithm program utilizes 750 elements and consists of two parts. During the first part a proposed weight of the code is delivered to the table of connections which is then printed. During the second part, the states of the automaton are encoded. A collection of codes is found for every state. One of the codes is stored in the main coding table and the remainder in the auxiliary table. Both tables are printed when every state is encoded. Codes can be lengthened automatically, if required. Automatons with 50-70 states can be encoded in 1.5-2 minutes and automatons with 150-200 states require 3.5-4 minutes of computer time. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 14Oct64   ENCL: 00   SUB CODE: DP

NO REF SOV: 003   OTHER: 000

Card 2/2

L 34157-65   EED-2/EWT(c)/EWP(k)/EWT(d)/EWP(h)/T/EWA(d)/EWP(l)/EWP(v)   Pf-4/Pg-4/
              Pk-4/Po-4/Pq-4   IJP(c)   GG/BB/GS

ACCESSION NR: AT5004747   S/0000/64/000/000/0018/0025

AUTHOR: Kartashev, V. I.

TITLE: Synthesis of the control of an arithmetic unit of a digital
computer

SOURCE: AN UkrSSR. Institut kibernetiki. Kibernetika i vychis-
litel'naya tekhnika (Cybernetics and computer engineering). Kiev,
Naukova dumka, 1964, 18-25

TOPIC TAGS: arithmetic unit, digital computer control, control
system synthesis, digital decoder, automaton, computer element

ABSTRACT: It is shown in the article that the conventional method
of controlling arithmetic units by using a decoding unit, an oper-
ating-step counter, and a system for controlling the operations has
several shortcomings, which can be eliminated by having the arith-
metic-unit control executed by means of finite automata, the feasi-

Card   1/3

L 34157-65

ACCESSION NR: AT5004747

bility of which has been demonstrated recently. The use of automata in the control units makes it possible to make the control units more compact and the most important feature is that it leads to complete formalization of the program design. Various types of control circuits based on the use of finite automata are described, and are broken up into three types. One covers control devices which have as many automata as there are microprograms in the control, with each automaton triggered by a signal from a central control unit. The second type uses one automaton in conjunction with a decoding block, which generates signals that change the state of the automaton in accordance with the required program. The presence of the decoding unit makes it possible to unify all the microprograms that have the same sequence of micro-operations. In the third type, the automaton is equipped with both a decoding unit and a circuit for the control of the micro-operations, in which case the automaton function reduces to timing of the operation steps. The synthesis of a control system for an arithmetic unit based on the latter modification is de-

Card   2/3

L 34157-65

ACCESSION NR: AT5004747

scribed. Orig. art. has: 3 figures and 7 formulas.

ASSOCIATION: None

SUBMITTED: 30Sep64   ENCL: 00   SUB CODE: DP

NR REF SOV: 001   OTHER: 000

Card   3/3

GREZDOVA, P.A.; KARTASHEV, V.I.

Synthesis of an automatic control unit with memory cells. Avt.
i prib. no.4:26-29 O-D '64   (MIRA 18:2)

L 33147-65

ACCESSION NR: AT5005505   S/0000/64/000/000/0032/0044

AUTHOR: Kartasheva, S. P.; Kartashev, V. L.

TITLE: An encoding algorithm for automata

SOURCE: AN UkrSSR. Institut kibernetiki. Kibernetika i tekhnika vychisleniy
(Cybernetics and computer engineering). Kiev, Naukova dumka, 1964, 32-44

TOPIC TAGS: coding, coding algorithm, automaton, digital computer, adjacent code

ABSTRACT: The problem of encoding the states of an automaton is encountered in the
synthesis of automata used in digital computers. The encoding process is based on
the fact that to each state of an automaton there corresponds a sequence of states
of elementary automata with memory which possess a complete system of transitions
and outputs. In real systems, arbitrary encoding of the states of an automaton can
cause "run-away" conditions. To prevent this, the adjacent states of an automaton
are encoded by adjacent codes, i.e. by codes whose number of digits differs only by
unity. An automatic machine is represented by a flow graph (X, Γ), where X is the
set of states of the machine which correspond to the vertices of the graph, and Γ
is the mapping of the graph (X, Γ) which defines the sequence of changes in the

Card 1/2

L 33147-65
ACCESSION NR: AT5005505

states of the machine. The authors show that the problem of encoding adjacent
states of an automaton by adjacent codes reduces to finding a mapping of the auto-
maton graph into a filled graph of O order (graph of an n-dimensional cube) which
preserves the adjacency of any arbitrary pair of vertices of the automaton graph.
To every mapping of the graph of the automaton A into a O order graph there cor-
responds a collection B of adjacent codes which satisfies the automaton A. The
evaluation of the mapping of the graph of an automaton A with M states is equiva-
lent to finding some equivalent circuit (chain) on the O order graph which includes
M vertices of the graph. Such an elementary circuit is found in two steps. The
first step evaluates the weights of the sequential vertices of the elementary cir-
cuit and the second step evaluates the vertices of the O order graph which could
belong to the elementary circuit. The second step requires the use of two tables:
main and auxiliary. A separate square in these tables is assigned to the code of
every state. One selected code is placed in the main table and all other varia-
tions of this code are stored in the auxiliary table. A numerical example is giv-
en by the author. Orig. art. has: 1 formula, 2 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 14Oct64   ENCL: 00   SUB CODE: DP

NO REF SOV: 003   OTHER: 002

Card 2/2

L 58849-65   EWT(d)/EED-2/EWP(L)   Pq-4/Pg-4/Pk-4   IJP(c)   RB/GG

ACCESSION NR: AP5014001   UR 0119/65/000/005/0014/0015
                                                 621.374.3:

AUTHOR: Kartashev, V. I. (Engineer); Khmel'nitskiy, F. I. (Engineer)

TITLE: Binary counter designed with universal elements

SOURCE: Priborostroyeniye, no. 5, 1965, 14-15

TOPIC TAGS: binary counter, AND NOT element, universal logical element

ABSTRACT: A binary counter is briefly described in which each digit is handled by
two triggers and two switching elements. Universal AND-NOT elements are used for
all purposes. A principal circuit diagram is given, and its operation explained.
An 11-digit counter of this type was built for a hide-area-measuring machine;
laboratory and operation tests of this counter "produced good results".
Orig. art. has: 5 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: DP, EC

NO REF SOV: 001   OTHER: 000

Card 1/1

GREZDOVA, P.A. [Hrezdova, P.A.] (Kiyev); KARTASHEV, V.I. [Kartashov, V.I.] (Kiyev)

Construction of a control automation using ferrite-transistor elements. Avtomatyka 10 no.2:54-60 '65.

(MIRA 18:6)

KARTASHEV, V.I. [Kartashov, V.I.] (Kiyev)

Use of automations in the control blocks of digital computers.
Avtomatyka 8 no.6:11-16 '63.   (MIRA 17:8)

LESHCHINSKIY, G.A., inzh.; MJSHCHANOV, F.A., inzh.; KARTASHEV, V.I., inzh.

Local norms for mining under conditions made hazardous by sudden outbursts of coal and gas. Shakht. stroi. 6 no.12:3-4 D '62.
(MIRA 16:5)

1. Kombinat Donetskshakhtostroy (for Leshchinskiy).
(Donets Basin--Coal mines and mining--Labor productivity)
(Mine gases)

KARTASHEV, V.I., inzh., KURCHIN, M.V., inzh.

Constructing a tower headframe at the "Butovskaia-Glubokaia" Mine.
Prom. stroi. inzh. soor. 1 no.1:27-29 O '59.   (MIRA 13:12)
                    (Donets Basin--Mine hoisting)

RABINOVICH, Z.L., kand. tekhn. nauk; MATSEVITYY, L.V.; KARTASHEV, V.I.

Universal logical unit and its use. Avtom. i prib. no.2:39-42
Ap-Je '63.   (MIRA 16:3)

1. Institut kibernetiki AN UkrSSR.

L 21192-65   RAEM(d)/ESD(dp)
ACCESSION NR: AP5001330   S/0102/64/000/006/0018/0022

AUTHOR: Kartashov, V. I. (Kartashev, V. I.) (Kiev)

TITLE: Determining the maximum frequency of changes of state of an automaton

SOURCE: Avtomatyka, no. 6, 1964, 18-22

TOPIC TAGS: automaton

ABSTRACT: The problems associated with determining the maximum frequency of changes of state in an automaton used in a digital-computer control unit are considered. The automaton consists of potential-type elements and can perform AND-NOT logical functions. The frequency of automaton-synchronizing signals is determined depending on the parameters of the elements and the control-unit structure. To avoid "racing" when several storage units have to be switched simultaneously, a delay unit is suggested for introduction between the combinatorial part of the automaton and the storage units. Orig. art. has: 1 figure and

Card 1/2

L 21192-65
ACCESSION NR: AP5001330

11 formulas.

ASSOCIATION: none

SUBMITTED: 03Dec63   ENCL: 00

SUB CODE: IE   NO REF SOV: 001   OTHER: 000

Card 2/2

L 22139-65 ASDA-5/AFMD(p)/AFETR/AFTC(b)/ESDD(p)

ACCESSION NR: AP5001737 S/0302/64/000/004/0026/0029

AUTHOR: Grezdova, P. A.; Kartashev, V. I.

TITLE: Synthesizing a control automaton from memorizing elements

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1964, 26-29

TOPIC TAGS: industrial automation, computer control

ABSTRACT: The procedures for constructing flow graphs and principal circuits of control automata designed with ferrite-transistor elements are described. A micro control unit can be constructed on the basis of a specified set of micro operations. Such units are combined into an automaton whose functioning may be described by a flow graph. The procedures are described in some detail, using a 10-node flow graph as an example. It is also reported that a laboratory hookup of a control automaton having 7 microprograms and 52 states functioned reliably during tests. Orig. art. has: 3 figures and 3 formulas.

Cord 1/2

L 22139-65

ACCESSION NR: AP5001737

ASSOCIATION: Institut kibernetiki AN UkrSSR (Institute of Cybernetics, AN UkrSSR)

SUBMITTED: 00   ENCL: 00

SUB CODE: IE   NO REF SOV: 002   OTHER: 000

Card 2/2

KARTASHEV, V.P., and YANUS, R.Y.

        "Some Structure Characteristics of the Family of the Symmetrical
Hystersis Loups of the Ferromagnetic Substances"   Sverdlovsk

Conference on Physics of Magnetic Phenomena,
May 1956, Sverdlovsk, USSR

KARTASHEV, V.P.; LILEYEV, M.V.; SKUL'SKIY, V.Yu.; SHUKSTOVA, Z.N.

Observation of the total solar eclipse of June 30, 1954, by the
Sverdlovsk eclipse expedition. Biul.VAGO no.23:3-17 '58.

(MIRA 11:11)

1. Ural'skiy gosudarstvennyy universitet im. A.M. Gor'kogo i
Sverdlovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo
obshchestva.

(Eclipses, Solar--1954)

KARTASHEV, V.S., starshiy inzh.-elektrik

New thermoelectric diesel set. Elek.i tepl.tiaga 6 no.2:21
F '62.   (MIRA 15:2)

1. Lokomotivnoye depo Krasnodar.
                    (Diesel locomotives)

KARTASHEV, Vasiliy Timofeyevich; PORTNOV, A.S., redaktor; BARSUKOVA, Yu.V., tekhnicheskiy redaktor

[Harness and saddles; manufacture and repair] Upriazh' i sedla; proizvodstvo i remont. Moskva, Vses,,kooperativnoe izd-vo, 1956. 195 p.   (MIRA 9:7)
        (Harness making and trade)

MATVEYEV, B.V., kand. tekhn. nauk; KARTASHEV, Yu.M., inzh.

[Handbook on conducting tests of the three-dimensional resistance of rocks to compression] Rukovodstvo po provedeniiu ispytanii ob"emnoi prochnosti na szhatie gornykh porod. Leningrad, 1962. 55 p.   (MIRA 16:10)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.

(Rocks—Testing)

KARTASHEV, Yu.M., inzh.

Testing the long-term volumetric hardness of rocks.   [Trudy] VMINI no.45:
315-324 '62.   (MIRA 16:4)
(Rocks—Testing)

KARTASHEV, Yu.M., inzh.

Laboratory determination of the physicomechanical properties of rocks from the Yakovlevo deposit of the Kursk Magnetic Anomaly for purposes of calculating pressures on supports of mine shafts. Trudy VNIMI no. 46:36-55 '62.

(MIRA 16:5)
(Kursk Magnetic Anomaly—Rocks—Testing)

MATVEYEV, B.V., kand. tekhn. nauk; KARTASHEV, Yu.M., inzh.;
      SHIKANOV, Ye.V., inzh.

      [Handbook on conducting tests for the volumetric compres-
      sion strength of rocks] Rukovodstvo po provedeniiu ispytanii
      ob"emnoi prochnosti na szhatie gornykh porod. Leningrad,
      1964. 74 p.   (MIRA 18:3)

      1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy in-
      stitut gornoy geomekhaniki i marksheyderskogo dela.

DMITRIYEV, S.I., inzh.; AL'KHIMOVICH, V.P., inzh.; KARTASHEV, Yu.M.,
inzh.; SHMAKOV, A.P., tekhnik

Mechanization of mining coal under a flexible metal covering.
Ugol' 39 no.8:62-65 Ag '64.   (MIRA 17:10)

KARTASHEV, Z. I.

Facial restorative surgery.   Rostov-n-D., Azovo-Chernomorskoe kraevoe kn-vo, 1935.
234 p.

KARTASHEV, Z.I.

Complete restoration of prolapse of the nose. Khirurgiia, Moskva
No. 4:6-10 Ap '50.   (CLML 19:2)

1. Of the Hospital Surgical Clinic imeni Prof. N.A.Bogoraz (Head--
Prof. Z.I.Kartashev), Rostov Medical Institute.

KARTASHEV, Z.I., professor.

Duodenal cancer. Khirurgiia no.2:8-14 F '54.   (MIRA 7:5)

1. Iz gospital'noy khirurgicheskoy kliniki (zaveduyushchiy - professor
Z.I.Kartachev) Rostovskogo-na-Donu meditsinskogo instituta.
    (Duodenum--Cancer)

KARTASHEV, Z.I., professor

Benign tumors of the mediastinum. Khirurgiia no.6:31-40 Je '54.
(MLRA 7:9)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. prof. Z.I.Kartashev)
Rostovskogo-na-Donu meditsinskogo instituta.
(MEDIASTINUM, neoplasms,
*benign)

KARTASHEV, Z.I., professor. (Rostov n/D.per Podbel'skogo d.31 kv.38)

Use of preserved homoplastic bone in restorative surgery. Vest.
khir.74 no.7:50-56 O-N '54.   (MLRA 8:10)

1. Iz gospital'noy khirurgicheskoy kliniki (zav.prof. Z.I.
Kartashev.)Rostovskogo meditsinskogo instituta.
        (TRANSPLANTATION,
            bone preserved homoplastic bone in restorative surg.)
        (BONE TISSUE, transplantation,
            preserved homoplastic bone in restorative surg.)

KARTASHEV, Z. I., prof.

Surgical treatment of pulmonary echinococcosis. Khirurgiia no.12:
(MIRA 8:4)
61-66 D '55

1. Iz gospital'noy khirurgicheskoy kliniki (zav. prof. Z. I. Kar-
tashev) Rostovskogo-na-Donu meditsinskogo instituta.
(LUNGS, deseases,
echinococcosis, surg.)
(ECHINOCOCCOSIS,
lungs, surg.)

KARTASHEVA, A.

Kartasheva, A. - "Diencephalitic epilepsy", Sbornik reabot Studench. nauch. o-va
Kar'k. med. in-ta, No. 8, 1949, p. 83-90.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

KARTASHEVA, A. L.

"Modification of the Biological Characteristics of Hemolytic Streptocci Due to the Effect of Antibiotics." Sub 1 Nov 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

KARTASHEVA, A. L.

SEMENOVA, Ya. L.; KARTASHEVA, A.L.; ABRAMOVA, G.F.; LOPATUKHINA, L.G.

Comparative therapeutic effectiveness of bacteriomycin, biomycin, streptomycin, and gamma globulin in plague; experimental studies. Zhur.mikrobiol.epid. i immun. 28 no.3:119-122 Mr '57. (MIRA 10:6)

1. Iz Sredneaziatskogo nauchno-issledovatel'skogo protivochumnogo instituta Ministerstva zdravookhraneniya Soyuza SSR.
        (PASTEURELLA PESTIS, effect of drugs on,
            antibiotics & gamma globulin (Rus))
        (ANTIBIOTICS, effects,
            on Pasteurella pestis (Rus))
        (GAMMA GLOBULIN, effects,
            same)

KARTASHEVA, A. L., SEMENOVA, E. L.

"Certain data on the dynamics of the blood, temperature and body weight of sand rats during experimental plague." p. 237

Desyatoye Soveshchaniye po parazitologicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with atural Foci 22-29 October 1959), Moscow-Liningrad, 1959, Academy of Medical Sciences USSR and Acad my of Sciences USSR, No. L 254pp.

Central Asiatic Antiplague Inst. /Alma ata

KARTASHEVA, A.L.; KAMENNOVA, L.S.

Case of lysis of the culture of Panterurella toviseptica by
plague bacteriophage. Biul.MOIP.Otd.biol. 67 no.4:155-156
Jl-Ag '62.   (MIRA 15:10)
        (BACTERIOLYSIS)   (PASTEURELLA BOLLINGERI)

KASHKIN, K.P.; KARTASHEVA, A.L.; PETROVA, I.V.; POLUSHKINA, E.F.

Comparative study of some indices of antimicrobial immunity
in rats of the "August" and "Wistar" lines. Vest. AMN SSSR
20 no.9:33-36 '65.   (MIRA 18:11)

1. Institut meditsinskoy radiologii AMN SSSR, Obninsk.

L 14155-66   EWA(b)-2/EWA(j)/EWT(1)/T   JK
ACC NR: AP6001314   SOURCE CODE: UR/0248/65/000/009/0033/0036

AUTHOR: Kashkin, K. P.; Kartasheva, A. L.; Petrova, I. V.; Polushkina, E. F.

ORG: Institute of Medical Radiology, AMN SSSR, Obninsk (Institut meditsinskoy radiologii AMN SSSR)

TITLE: Comparison of some indices of antimicrobic immunity in rats of the August and Wistar strains

SOURCE: AMN SSSR. Vestnik, no. 9, 1965, 33-36

TOPIC TAGS: immunity, radiation injury, pathogenesis, bactericide, rat

ABSTRACT: Serum complement activity, blood bactericidal activity, immunization through vaccination and phagocytic activity of peripheral blood cells were compared in rats of the August and Wistar strains. Despite major differences in weight and growth, rats of both strains were comparable in these immunology tests and differed significantly only in the phagocytic activity of peripheral blood neutrophils (tested against *B. bronchisepticus* and *S. paratyphi B*). Wistar rats were found to have

UDC: 612.017.1-019

Card 1/2

L 14155-66
ACC NR: AP6001314

1½ times more leukocytes than the August rats. Therefore, although the two strains have almost the same number of neutrophils and percentage of active phagocytes, the Wistar rats possess a more powerful peripheral blood phagocytic apparatus. Since immunization of the animals stimulates phagocytosis and increases the number of active phagocytes in both strains equally. The Wistar rats are found to be superior with respect to phagocytic activity. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 06/   SUBM DATE: 05Jun65/   ORIG REF: 001/   OTH REF: 003

Card 2/2

K A R T A S H E (A) A A   123-1-1430-D

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957,
        1957, Nr 1, p.205 (USSR)

AUTHOR: Kartasheva, A.N.

TITLE: Study of Errors in Electro-Mechanical Profile-Meters
             (In Measuring the Micro-Irregularities of Surfaces
             With a Regular Profile) (Issledovaniye pogreshnostey
             elektromekhanicheskikh profilometrov (pri izmerenii
             mikronerovnostey poverkhnostey s regulyarnym profilem))

ABSTRACT: Bibliographic entry on the author's dissertation for the
             degree of Doctor of Technical Sciences, presented to the
             L'vov Polytechnical Institute (L'vovsk. politekhn. in-t),
             L'vov, 1956.

ASSOCIATION: L'vov Polytechnical Institute (L'vovsk. politekhn. in-t)

Card 1/1

K A R T A S H E V A, A N.

AUTHORS: Yegorov, V.A., and Kartasheva, A.N.   115-5-6/44

TITLE: A New Piezoelectric Profilometer (Novyy p'yezoelektricheskiy
              profilometr)

PERIODICAL: "Izmeritel'naya Tekhnika", No 5, Sep-Oct 1957, pp 15-16 (USSR)

ABSTRACT: The subject instrument, profilometer "AБ" was developed at
              the Moscow Institute of Aviation-Technology (Moskovskiy
              aviatsionnyy tekhnologicheskiy institut) under the direction
              of I.V. Dunin-Barkovskiy. The instrument is designed for
              measuring the roughness of 5th to 12th class surfaces by the
              standard "ГОСТ-2789-51".   It features a piezoelement con-
              sisting of two ceramic barium metatitanate laminae which are
              glued together and a sapphire feeler with 10 microns radius
              of tip. Barium metatitanate is stated to be highly piezo-
              effective, stable, independent of temperature in a wide temper-
              ature range, and possesses a high mechanical strength. These
              properties make it highly suitable for electromechanical pro-
              filometers. The design of the instrument is described in
              detail. It eliminates the input and output transformers and
              the integrating contour. The four measurement ranges of the
              "AБ" profilometer are: 0-0.1 microns, 0-0.4 microns, 0-1.6
Card 1/2   microns, and 0-6.4 microns. It is claimed that the measure-

28-58-3-30/39

AUTHORS: Dunin-Barkovskiy, I.V. and Kartasheva, A.N., Candidates of
            Technical Sciences

TITLE: Production Control of Surface Finish in Machine Building Must
            be Improved (Uluchshit' proizvodstvennyy kontrol' chistoty po-
            verkhnostey v mashinostroyenii)

PERIODICAL: Standartizatsiya, 1958, Nr 3, pp 81-92 (USSR)

ABSTRACT: Information is given on the conditions revealed by an inspection
            of Moscow and Leningrad plants. Instruments for surface-finish
            checks are, as a rule, available only in the plant laboratory
            and are used only in cases of disputes. At large plants, in-
            struments are available in lots of one for every 2 or 3 work-
            shops. Surface-finish checking instruments, like the "PCh-2"
            and "KV-7" profilometers, or "Kalibr-VEI" of the Plant "Kalibr",
            are inaccurate and unreliable and workers frequently refuse to
            use them. At the plant "Kalibr" producing measuring instruments,
            the instruments are checked by the crude "PCh-2" gage of the
            Leningradskiy instrumental'nyy zavod (Leningrad Tool Plant). The
            instruments in use at the plants have never been checked for
            accuracy. The optic instruments are time-consuming and are also
            unreliable; the double "MIS-11" microscope as well as the inter-

Card 1/2

28.58 3-30/59

Production Central of Surface Finish in Machine Building Must Be Improved

ference microscope are not reliable and cannot be used for a direct checking of large parts. Thus workers and shop inspectors rely on their eyes and experience, despite the precise surface finish indications in drawings. It is also stated that no measures are being taken to correct such conditions. The authors think that the work of the separate institutes and plants concerned must be coordinated and planned in accordance with the requirements of the industry.

Card 2/2   1. Finishes—Standards   2. Machines—Inspection

SOV-28-58-4-12/35

AUTHOR: Kartasheva, A.N., Candidate of Technical Sciences

TITLE: Changes in Profilemeters for Measuring Micro-Roughness
             (Izmeneniya v profilometrakh dlya izmereniya mikronerov-
             nostey)

PERIODICAL: Standartizatsiya, 1958, Nr 4, pp 43 - 46 (USSR)

ABSTRACT: In the new standards for profilemeters, the usual H_{sk} pa-
             rameter serving as a basic criterion for the suface rough-
             ness was replaced by a substantially different R_a parame-
             ter, i.e. the arithmetical mean of absolute values of di-
             stances between the points of the measured profile and its
             mean line. As a result, the design of H_{sk} profilemeters
             will be connected with alterations. It is stated that the
             principal difference of H_{sk} and R_a profilemeters consists
             in their rectification circuit. Different circuits are
             analyzed and compared and the conclusion is made that for
             transforming the H_{sk} into a R_a profilemeter, the rectify-

Card 1/2

Changes in Profilemeters for Measuring Micro-Roughness   SOV-28-58-4-12/35

        ing system must be changed, the needle-indicator scale has
to be remade and the amplification factor of the intensi-
fier must be raised.   There are 6 circuit diagrams, 1
graph and 1 table.

        1. Profilimeters--Design   2. Surfaces--Inspection

Card 2/2

DUNIN-BARKOVSKIY, I.V.; KARTASHEVA, A.N.

Accuracy of the measurement of surface roughness. Nauch.dokl.
vys.shkoly; mash.i prib. no.4:160-169 '58.   (MIRA 12:5)

1. Stat'ya predstavlena kafedroy "Tekhnologiya mekhanicheskoy
obrabotki i metallorezhushchiye stanki" Moskovskogo tekhnologiche-
skogo instituta.
                (Surfaces(Technology)---Measurement)

AUTHORS: Dunin-Barkovskiy, I.V., Kartasheva, A.N.   SOV/115-58-6-4/43

TITLE: On Quality Evaluation of Methods for Checking Measuring Devices (Ob otsenke kachestva metodik poverki izmeritel'nykh priborov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, pp 6-11 (USSR)

ABSTRACT: The checking of measuring devices of a single type is often carried out by different methods. For the evaluation of the different methods there is no objective criterium. Lever-mechanical measuring devices are checked by testing separate points of the scale where the error must not exceed the tolerance limit. The checking of the error of a device may be used for checking the statistical hypothesis N on the fact that 99.7 % of the central interval $(a - 3\delta, a + 3\delta)$ of the normal distribution lies completely within the given interval $(-\Delta, \Delta)$, where a is the abscissa of the distribution center of the indication errors of the device, their average quadratic deviation, and $\Delta = [\Delta_{lim}]$ the permissible value of the indication error. Figure 1 shows one of the possible distributions of these intervals for $3\delta < \Delta$. The data of the table was used to draw the operation curve $R_n - \frac{c}{\Delta}$, where R_n is the probability of applying the hypothesis N (Figure 2).

Card 1/2

SOV/115-58-6-4/43

On Quality Evaluation   of Methods for Checking Measuring Devices.

The operation characteristic is still far from an ideal characteristic. Figures 3 and 4 show operation curves for the hypothesis N using values of the parameter $\frac{\Delta\delta}{\Delta}$ = 0.25; 0.50; 0.75. Using the principles of modern mathematical statistics an objective criterium for the reliability of the methods of checking measuring devices may be developed and scientifically proved.
There are 4 graphs, 1 table and 1 Soviet reference.

Card 2/2

DUNIN-BARKOVSKIY, I.V., kand.tekhn.nauk; KARTASHEVA, A.N., kand.tekhn.nauk;
KARTASHEVA, A.N., kand.tekhn.nauk.

Improve check tests of surface smoothness in machinery industry.
Standartizatsiia 22 no.3:81-82 My-Je '58.   (MIRA 11:7)
          (Surfaces (Technology)--Testing)

KARTASHEVA, A.N., kand.tekhn.nauk.

Changes in profilometers used in measuring minor surface roughness.
Standartizatsiia 22 no.4:43-46 Jl-Ag '58.   (MIRA 11:10)
(Electronic instruments) (Surfaces (Technology--Testing))

25 (1), 28 (1)   SOV/115-59-10-4/29

AUTHOR: Kartasheva, A.N.

TITLE: Determining the R_a Surface Roughness Parameter With a
                Planimeter

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 10, pp 10-11 (USSR)

ABSTRACT: The use of a PP-2k(MIIZ) geodetic planimeter is recom-
                mended for the determination of the R_a surface rough-
                ness parameter, as set by the GOST 2789-59. The
                basic roughness parameter is the arithmetical mean
                from absolute values of distances of points on the
                measured profile from its R_a central line. The method
                is described in detail. There are 1 diagram and
                1 table.

Card 1/1

KARTASHEVA, A.N.

Automation of the statistical processing of observations. Izm.
tekh. no.1:18-20 Ja '60.   (MIRA 13:5)
        (Statistics)   .   (Automatic control)

KANTASHEVA; A.N.

Investigating the relationship between errors of feeler-type profilo-
meters and parameters of their moving systems and the characteristics
of the tested surface. Trudy VNIIK no.4:20-33 '60.   (MIRA 13:12)
            (Surfaces (Technology)--Testing)

KARTASHEVA, A.N.

Continuity of the enveloping of surface roughnesses by the feeler
of a profilometer. Trudy VNIIK no.4:34-40 '60.   (MIRA 13:12)
                   (Surfaces (Technology)--Testing)

DUNIN-BARKOVSKIY, I.V., kand.tekhn.nauk; KARTASHEVA, A.N., kand.tekhn. nauk

Determining the statistical characteristics of the mass or thickness of yarn. Tekst.prom. 20 no.8:43-46 Ag '60.
(MIRA 13:9)

(Thickness measurements)   (Yarn)

DAVYDOV, B.S.; KARTASHEVA, A.N.

Feeler-type instruments for determining surface roughness.
Standartizatsiia 24 no.8:40-42 Ag '60.   (MIRA 13:9)
              (Surfaces (Technology)--Testing)

25100
S/122/60/000/011/020/020
A161/A130

AUTHORS: Davydov, B.S.; Kartasheva, A.N.

TITLE: Particular points of the new standard for feeler instruments for determination of surface roughness in the machine industry

PERIODICAL: Vestnik mashinostroyeniya, no. 11, 1960, 80 - 81

TEXT: Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Minis- trov SSSR (The Committee of Standards, Measures and Measuring Instruments at the Council of Ministers of the USSR) has approved a new standard – "Feeler Instru- ments for Determination of Surface Roughness. Types. Basic Parameters and Ac- curacy Norms". It complements the ГОСТ 2789-59 (GOST 2789-59) standard for sur- face roughness, includes the basic R_a parameter of profilometers and profilo- graphs, and standardizes the roughness measurements in the industry regardless of the design features of instruments. It is the first Soviet standard for such in- struments, is claimed to be the most complete of analogous standards exiating in other countries, and contains some new conceptions and designations needing ex- planation. The profilometers are subdivided into three types – of the highest accuracy, П-7 (P-7); medium accuracy, П-10 (P-10); and limited accuracy, П-16

Card 1/4

Particular points of the new standard for....

25100
S/122/60/000/011/020/020
A161/A130

(P-16). The accuracy is characterized by "peredatochnoye otnosheniye" (ratio), i.e., the relation of R_a reading on the scale in microns to set linear needle displacement (also expressed through R_a in microns). The relative error of the profilometer ratio is determined by the formula

$$\delta_n = \frac{R_a - R_a'}{R_a'} \cdot 100\%,$$ (1)

where R_a are readings in microns; and R_a' the mean arithmetical value of the needle displacement setting. The ratio error is determined by methods specified in the "148-59" instructions, with the use of a vibrator imparting sinusoidal oscillations to the needle. This eliminates the component errors from the measuring effort P and needle tip radius r. The P-7 profilometers have $\delta_n \leqslant \pm 7\%$ and are designed nearly exlusively for research, expert decisions, and profilometers of designs analogous with the known profilometer of the "Kalibr" Plant and Vsesoyuznyy elektrotekhnicheskiy institut (All-Union Electrotechnical Institute) that belong to this group. The P-10 with $\delta_n \leqslant \pm 10\%$ are for both laboratory and shop use; they are less complex and costly, of less weight and size. The major mass of piezoelectric and induction profilometers belongs to them. The simplest P-16 $\delta_n \leqslant \pm 16\%$) include instruments that are analogous with the latest П-4 (P-СЧ) profilometers. The profilographs (being nearly exclusively laboratory instru-

Card 2/4

Particular points of the new standard for....

25100
S/122/60/000/011/020/020
A161/A130

ments) are divided into two types $-\Pi\Gamma-5$ (PG-5) with ratio error $\delta_{n_2} \leqslant \pm 5\%$ and PG-10 with $\delta_{n_2} \leqslant \pm 10\%$

$$\delta_n = \frac{\frac{H}{V_o} - H_o}{H_o} \, 100\% , \tag{2}$$

where H is the displacement of the stylus or of the "light spot" of the recorder read from the profilogram, in microns; H_o - the value of set needle displacements, in microns; and V_o - the nominal vertical enlargement of the instrument. The new standard introduces additional requirements for the determination of profilometer reading error, and errors of vertical enlargements of the profilographs. The vertical enlargement error is determined (as per the "149-59" instruction) with "odnoshtrikhovyye mery vysoty nerovnosti" (... ... line roughness gages) produced at the repair-and-experiment workshops of VNIIKSMI, i.e., by single carefully graduated notches. Same gages are used for checking horizontal enlargements with two additional notches. The horizontal enlargement error of a profilograph must not exceed $\pm$ 10%. As according to ГOCT 9017-59 (GOST 9017-59) standard, the feeler instruments are to be provided with needles with r = 10 micron, and profilographs with r = 2 micron needles. The new standard only sets limits to the static effort of feeler instruments; it has to be in the range 0.1 - 2 g. For instruments with a resilient needle suspension (e.g., on a spring parallelogram) the effort constant, or gradient (effort variation in axial displacement

Card 3/4

Particular points of the new standard for....

25100
S/122/60/000/011/020/020
A161/A130

for 1 micron) must be within the range 0.006 - 0.12 g/micron. (The "Kalibr-VEI" profilograph-profilometer has the first suspension kind, and the majority of feeler instruments like the P-Ch have a parallelogram). An important character- istic for the feeler instruments is the range of surface irregularities spacing range within which the ratio error is not exceeded. The standard sets a minimum only for this range (B_{min} = 2 + 3 micron). For the P-16 profilometers this min- imum is 5 micron. The maximum spacing is called "otsechka shaga" ("spacing cut- off") and signifies limiting of the spacing of the largest irregularities by switching-on electric filters with certain characteristics. This requirement will be considered additionally. The "cutoffs" are numerically equal to the base lengths per GOST 2789-59, i.e., 0.08; 0.25; 0.8 mm, etc. Apart from electrical methods for eliminating irregularities with larger spacing from the measurement results, the same results can be achieved using a rest with a certain radius sliding on the surface. Vertical enlargement limits for profilographs are 100 - 100,000 and horizontal between 10 and 2,000 - 2,500.

Card 4/4

DUNIN-BARKOVSKIY, I.V., kand.tekhn.nauk, dotsent; KARTASHEVA, A.N., kand.
        tekhn.nauk

Accuracy of methods to determine the position of a contoured surface
mean line. Trudy MATI no.45:27-47 '60.   (MIRA 14:1)
                        (Surfaces (Technology))

DUDIN-BARKOVSKIY, I.V.; KARTASHEVA, A.N..

Designing profilometers. Priborostroenie no.7:9-11 Jl '61.
(MIRA 14:6)

(Electric instruments)

KARTASHEVA, A.N.

Precision and reliability of the determination of surface
roughness parameters by the profile reproduced by a feeler
gauge or an optical device. Trudy Sem.po kach.poverkh.
no.5:191-199 '61.   (MIRA 15:10)
              (Surfaces (Technology)--Testing)

KARTASHEVA, A.N.

Profile length needed for a reliable determination of the parameters
of surface roughness. Trudy inst.Kom.stand., mer i izm. prib no.47:
193-198 '61.   (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut Komiteta standartov,
mer i izmeritel'nykh priborov pri Sovete Ministrov SSSR.
                (Surfaces (Technology)—Testing)

KARTASHEVA, A. N.

Statistical criteria for evaluating the reliability of the
check of instruments for linear measurements. Trudy inst. Kom.
stand. mer i izm. prib. no.57:78-90 '62.

(MIRA 15:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut Komiteta
standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov
SSSR.

(Measuring instruments—Testing)

AUTHOR: Kartasheva, A.V.   32-12-16/71

TITLE: Short Reports (2) (Korotkiye soobshcheniya).

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 12, pp. 1437-1437 (USSR)

ABSTRACT: For the determination of phosphorus in stainless steel with a high
               content of chromium (brand X-28) the author of this paper recom-
               mends using the method of colorimetric titration after the phospho-
               rus molybdenum acid assumes a yellow color when being extracted by
               the mixture of butyl-alcohol and chloroform. Besides, it is recom-
               mended to change the well-known method developed by Zhorovskiy and
               Kostyshev in the following manner: A sample dose of 0.5 g (steel)
               is assumed; for the oxidation of phosphorus a potassium permanga-
               nate solution is to be used; colorimetric titration is in this case
               to be replaced by measuring the optical density on the photometer
               "ϕ M" by plotting a calibrated curve. There is 1 Slavic reference.

ASSOCIATION: Central Laboratory of the "Bol'shevik" Plant (Tsentral'naya
               laboratoriya zavoda "Bol'shevik").

AVAILABLE: Library of Congress

Card 1/1   1. Stainless Steel-Phosphorus determination   2. Colorimetric titration
                   method

ACCESSION NR: AT4033977   S/0000/63/000/000/0003/0008

AUTHOR: Poddubny*y, I. Ya.; Erenburg, Ye. G.; Kartasheva, G. G.

TITLE: The weight and dimensions of polyhexafluoroamyleneadipinate macro-molecules

SOURCE: Geterotsepny*ye vy*sokomolekulyarny*ye soyedineniya (Heterochain macromolecular compounds); sbornik statey. Moscow, Izd-vo "Nauka," 1963, 3-8

TOPIC TAGS: polyhexafluoroamyleneadipinate, fluorinated polyester, macromolecule, molecular weight, polymer, polymer weight, polymer dimensions, fluorinated polyester

ABSTRACT: To fill the existing gap in reliable data on the weight and dimensions of macromolecules of fluorinated polyesters, the authors undertook to determine the weight, dimensions and flexibility of, and molecular weight distribution in, macromolecules of polyhexafluoroamyleneadipinate. In the 16 fractions, obtained from two adipihate samples by fractional precipitation with methyl alcohol, the molecular weight was determined indirectly from the characteristic viscosity and light scattering which were measured with a conventional Ostwald viscosimeter for volatile solvents at 20C and a Tsvetkov visual polarization nephelometer,

Card 1/2

PODDUBNYY, I.Ya.; KRENBURG, Ye.G.; CHERNOVA-IVANOVA, Ye.P.;
    KARTASHEVA, G.G.

Effect of the association of polybutadiene macromolecules in
various solvents. Dokl. AN SSSR 148 no.2:384-387 Ja '63.
                                                    (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka
im. S.V. Lebedeva. Predstavleno akademikom V.A. Karginym.
            (Butadiene polymers) (Molecular association)

Kartasheva, K. M

The passivity of iron in acid solutions. A. M. Sukhotin and K. M. Kartasheva (State Inst. Appl. Chem., Leningrad). Zhur. Fiz. Khim. 31, 1256–66(1957).—The normal oxidation-reduction potentials of Fe_2O_3, Fe_3O_4, and FeO were tabulated from the Natl. Bur. Standards (U.S.) Circ. No. 500(1952). It was concluded that the passivating film and Fe_3O_4 are energetically and stoichiometrically identical. The activation of Fe in acid solns. may result from the reduction of the passivating film, $Fe_3O_4 + 8H^+ + 2e \rightarrow FeO + 2Fe^{++} + 3H_2O$. The electrochem. formation of FeO and $\gamma\text{-}Fe_2O_3$ on the passive Fe surface was demonstrated by x-ray examn. of the deposit between -0.05 and $+0.58$ v. Formation of the passivating film proceeded by direct oxidation of Fe ($3Fe + 4H_2O \rightarrow Fe_3O_4 + 8H^+ + 8e$) at a potential of -0.035 v. provided the rate of its formation exceeded some unexplained crit. c.d. value of 0.1–0.3 amp./sq. cm. Expts. with lower c.d. produced thick oxide deposits with no passivation.   W. M. Sternberg

TSEFT, A.L.; ABLANOV, A.D.; TKACHENKO, O.B.; BATYRBEKOVA, S.A.; TULENKOV,
L.N.; KARTASHEVA, L.A.

Treatment of complex metal sulfide ores by solutions of iron
chloride; results of enlarged laboratory tests. Trudy Inst.
met. i obog. AN Kazakh. SSR 14:41-47 '65.   (MIRA 18:10)

KARTASHEVA, L. I.

Action of propylmagnesium bromide on silicon tetra-bromide. N. S. Nametkin, A. V. Topchiev, and L. I. Kartasheva. *Doklady Akad. Nauk S.S.S.R.* 93, 697—.(1953).—To 114 g. Mg and a little Et$_2$O was added with stirring a mixt. of 655 g. PrBr with 1 vol. Et$_2$O, followed by 522 g. SiBr$_4$ in 1 vol. Et$_2$O; after refluxing 3 hrs., the solvent was removed, the residue extd. with MeOH and the ext. distd. yielding after several distns. 41 g. Pr$_4$Si, b$_{14}$ 213—14°, d$_{20}$ 0.7870, n$^{20}_D$ 1.4376 (isolated only after hydrolysis of the crude product with the removal of interfering Pr$_3$SiBr; this gave 18.3 g. Pr$_3$SiOSiPr$_3$ (I), b$_{14}$ 278—80°, b$_2$ 134—5°, d$_{20}$ 0.8381, n$^{20}_D$ 1.4412, and a linear polysiloxane, b$_2$ 155—200°, d$_{20}$ 0.8680, n$^{20}_D$ 1.4418, (probably Pr$_3$SiOSiPr$_2$OSiPr$_3$). I with PBr$_5$ gave Pr$_3$SiBr (in 55.69% yield), b$_{14}$ 212—13°. The higher fractions of the original reaction mixt. gave Pr$_2$SiBr$_2$, b$_{14}$ 203—4°. Reaction of PrBr with Si—Cu at 300° yielded some PrSiBr$_3$, b$_{14}$ 178—80°.   G. M. Kosolapoff

KARTASHEVA, L. I.

USSR/Chemistry - Organic chemistry

Card 1/1   Pub. 22 - 26/51

Authors   : Nametkin, N. S.; Topchiyev, A. V., Academician; and Kartasheva, L. I.

Title   : Reactions of propyl bromide and butyl bromide with silicon

Periodical : Dok. AN SSSR 101/5, 885-887, Apr 11, 1955

Abstract   : The reaction of C_3H_7Br and C_4H_9Br with Si was investigated at tempera-
             tures of 260-340°. The basic reaction products were found to be
             tetrabromosilane and tribromosilane which form according to certain
             described schemes. It was established that some reaction products
             having a 170° boiling point contained basically alkyltribromosilane
             and hexabromodisilane. The chemical properties of the reaction products
             were identical to those mentioned in literature and their analyses
             coincided with estimated values. Six USSR references (1951-1953). Tables.

Institution : Acad. of Sc., USSR, Petroleum Inst.

Submitted : December 14, 1954

KARTASHEVA, L. I.

AUTHORS: Barelko, Ye V., Kartasheva, L. I., Proskurnin, M A.

20-1-20/44

TITLE: On the Nature of the Insoluble Product Formed on Radiolytic Oxidation of Benzene in Water (O prirode nerastvorimogo produkta obrazuyushchegosya pri radioliticheskom okislenii benzola v vode).

ABSTRACT: The reactions of organic substances, as mentioned in the title, are in spite of the great interst which they offer little investigated. The chief difficulty consists in the isolation and identification of the reaction products which cn that occasion form in small amounts. Stein & Weiss which had for the first time studied this reaction came to the conclusion that phenol and diphenyl are the chief products forming in this connection. But in later works it was proved that, in case that the process is carried out in an oxygen atmosphere, diphenyl cannot at all be detected. When, in the absence of oxygen, ions of variable valency are introduced into the system, the yield of diphenyl can sharply be reduced. These icns increase the yield of phenol independently of the presente or absence of O_2.

The problem of the formation of diphenyl remained unsolved. It
Card 1/4   should, in the case of formation in considerable amounts, fall out.

On the Nature of the Insoluble Product Formed on Radiolytic   20-1-20/44
Oxidation of Benzene in Water.

as precipitation. Although none of the numerous papers deals with
the chemical nature of the water-insoluble precipitation, it is
a priori considered as diphenyl. The present paper is dedicated to
the determination of this problem. The not only theoretical interest
lied in the fact that the formation of precipitation does not only
reduce the useful yield of phenol, but also renders difficult its
isolation, since the precipitate in the solutions forms an extremely
stable emulsion which is difficult to dissolve. Co^{60} served as source
of the γ - radiation. As figure 1 shows, the amount of precipitate
increases linear with increasing dose of radiation. In the spectrum
of the precipitate (in ethanol solutions) a single maximum was dis-
covered in the walve-length range λ = 250 mμ (figure 2, curve 1);
the spectrum considerabley differed from that of diphenyl. Further
differences of the precipitate toward diphenyl are given. The inve-
stigation of the properties of the former shows that it does not
consist of diphenyl, but of its oxy- (most probably dioxy-) deri-
vative. This result is of fundamental importance, as it forces to
supplement the scheme of the radiolytic oxidation of benzene in water
according to Stein & Weiss in its totality or at least in its essen-
tial aspects. If starting from this scheme, the formation of the
Card 2/4   last-mentioned substances can not be understood. The authors see a

20-1-20/44

On the Nature of the Insoluble Product Formed on Radiolytic Oxidation of Benzene in Water.

possible way of explaining their formation in the fact that the free radical, oxyhexadienyl (C_6H_6OH), which forms on collision of the benzene molecule with a free hydroxyl is a sufficiently long-lived compound, in order to make possible the recombination of both such radicals among each other or of one such radical with the radical C_6H_7 or with a benzene molecule. A formation-scheme of the precipitate formed here might be:

$$C_6H_7 + C_6H_6 \quad\text{------}\rightarrow\quad C_6H_8 \quad\text{---}\quad C_6H_5OH.$$
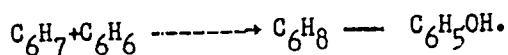
The missing discovery of diphenyl further leads to the assumption that the formation of phenol must not go through the stage of the formation of free phenyl either. E. g. it may be imagined that in the reaction of two oxyhexadienyl-radicals a parallel process of phenol formation may take place beside the joining of the rings. The thought rises that the polymeric compounds which form on radiation of pure benzene may also contain hydrated members, if this is assumed, the small radiation-chemical yield of hydrogen can in this case be explained.

Card 3/4

BARELKO, Ye. V., KARTASHEVA, L. I., NOVIKOV, P. D. and PROSKURNIN, M. A.

"Oxidation of Water Solutions of Benzene Under the Influence of Gamma Radiation"
p.89

Trudy Transactions of the First Conference on Radioaction Chemistry, Moscow,
Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow

SOV/62-58-8-6/22

AUTHORS: Topchiyev, A. V., Nametkin, N. S., Kartasheva, L. I.

TITLE: Reaction of Ethyl Bromide With Silicon (Reaktsiya bromistogo etila s kremniyem)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 8, pp. 949-953 (USSR)

ABSTRACT: This paper was written for the purpose of investigating the possible production of alkyl bromosilanes with various organic radicals. The investigation of this reaction of ethyl bromide with silicon in the presence of reduced copper within the temperature intervals of from 260-380°C is described. Ethyl tribromosilane was found as basic product of the reaction; its yield increases considerably if the temperatures of the reaction rise. The formation of diethyl dibromosilane and especially of triethyl bromosilane in connection with a partial pyrolysis of ethyl bromide took place to a much lower degree. It was found that in the reaction products also silicon compounds are contained (with the binding Si - H = tribromosilane and ethyl dibromosilane). There are 2 figures, 7 tables, and 5 references,   which are Soviet.

Card 1/2

SOV/62-58-8-6/22

Reaction of Ethyl Bromide With Silicon

ASSOCIATION: Institut nefti Akademii nauk SSSR (Institute of Petroleum, AS USSR)

SUBMITTED: January 14, 1957

Card 2/2

5(4)   SOV/20-121-4-27/54
AUTHORS: Proskurnin, M. A.,   Barelko, Ye. V.,   Kartasheva, L. I.

TITLE: Water as a Sensibilizer of the Radiation Initiation of the
              Oxidation Process of Benzene (Voda kak sensibilizator
              radiatsionnogo initsiirovaniya protsessa okisleniya benzola)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 4, pp 671-673
              (USSR)

ABSTRACT: This paper deals with the oxidation of benzene in the aqueous
              phase according to a branched-chain mechanism and, especial-
              ly, with the rôle of water as a sensibilizer of radiation
              initiation. This type of oxidation was discovered by the
              above-mentioned authors. Co^{60} was used as a source of radia-
              tion. The experiments were carried out in an autoclave of
              stainless steel. The average dosage rate was 140 r/sec. A
              diagram gives the dependence of the concentration of phenol
              on the radiation dose for various temperatures. For the
              purpose of comparison,the same diagram gives also the ana-
              logous curve for the oxidation of benzene if there is no
              water. In an aqueous solution the reaction has a distinct
Card 1/3   autocatalytic character already at the temperature of 165°.

SOV/20-121-4-27/54

Water as a Sensibilizer of the Radiation Initiation of the Oxidation Process
of Benzene

Resins are produced simultaneously with the production of
phenol in the liquid phase. The kinetic curve of the produc-
tion of phenol (for the case, that the radiation was finished
2 hours after the beginning of the experiment and that the
reaction continued) is another proof of the fact that the
investigated reaction is a branched chain process where the
radiation may be used as an initiating factor. If there is
no water, no transition to a self-accelerating course of the
reaction at 220^0 under similar conditions can be observed.
According to the authors' opinion, the use of chemically
inert (but instable with respect to the radiation) substances
(water is a special case) as sensibilizers of the radiation
initiation of branched chain processes may be very important.
There are 3 figures and 11 references, 6 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im.
L. Ya. Karpova (Scientific Physical-Chemical Research Insti-
tute imeni L. Ya. Karpov)

Card 2/3

SOV/20-121-4-27/54

Water as a Sensibilizer of the Radiation Initiation of the Oxidation Process of Benzene

PRESENTED: March 15, 1958, by V. N. Kondrat'yev, Academician

SUBMITTED: March 12, 1958

Card 3/3

KARTASHEVA L. I.

PHASE I BOOK EXPLOITATION   SOV/4386

Moscow. Fiziko-khimicheskiy institut

Problemy fizicheskoy khimii; trudy, vyp. 2 (Problems in Physical Chemistry; Transactions of the Institute, no. 2), Moscow, Gosizdat, 1959. 202 p. 1,000 copies printed.

Editorial Board: Ya. M. Varshavskiy, Doctor of Chemical Sciences; O. S. Zhdanov, Doctor of Chemical Sciences; V. A. Kargin, Academician; Ya. M. Kolotyrkin, Doctor of Chemical Sciences (Resp. Ed.); S. S. Medvedev, Academician; S. Ya. Pshezhetskiy, Doctor of Chemical Sciences; V. M. Cherednichenko, Candidate of Chemical Sciences; V. S. Chesalova (Editorial Secretary). Candidate of Chemical Sciences; Ed.: I. A. Myasnikov; Tech. Ed.: Ye. O. Shpak.

PURPOSE: This collection of articles is intended for physical chemists.

COVERAGE: The collection is the second issue of the Transactions of the Scientific Research Institute of Physical Chemistry imeni L. Ya. Karpov. It contains 17 articles which review...

Temkin, M. I., M. M. Morozov, V. N. Pyzhev (Deceased); ... G. Apel'baum, L. I. Lukyanova, and V. I. Demidkin. The Oxi-dation of Ammonia Over a Nonplatinum Catalyst   14

Pshezhetskiy, S. Ya., S. A. Kamenetskaya, Ye. I. Gribova, A. V. Pavlovskiy, N. M. Romanov, I. N. Popelova, A. Ya. Apin, T. M. Niratkina, N. A. Slavinskaya, and V. M. Cherednichenko. Kinetics of Decomposition, and the Explosion of Ozone   27

Mortimer, Geoffrey (Japan). How to Find the Kinetic Equation of a Reversible Reaction   39

Kolotyrkin, Ya. M. The Effect of the Specific Adsorption of Anions on the Kinetics of Hydrogen Evolution and the Structure of the Metal-Solution Boundary   50

Varshavskiy, Ya. M. The Nature and Mechanism of Electrophilic Hydrogen Exchange   61

Zysonkova, L. V. Crystallochemical Data on the Nature of the Mutual Effect of Atoms   97

Emannuel, O. L. Investigation of the Effect of Inter-molecular Interaction on the Ultraviolet Absorption Spectra of Aromatic Compounds   107

Saulina, Ye. I., V. S. Kutsev and B. P. Ormont. Investi-gation of Equilibrium in the System Zirconium-Nitrogen at High Temperatures and the Dependence of the Free Energy of ZrN Formation on its Composition and Structure   118

Brodaer, A. D., M. A. Proskurnin, L. A. Chiriyev, L. L. Kartasheva and Ye. S. Kabakchi. Study of the Field of Forces of Dose: from Cylindrical Irradiator with Co60 as a Power-ful Source of γ Radiation   132

Petrov, I. K., B. G. Vasiliev and N. M. Tuntiskiy. Study of the Ionization and Dissociation of n-Octane and n-Nonane Molecules by the Method of Bombardment with "Quasi-Monokinetic" Electrons   146

Babarkin, A. S. Radiation-Chemical Effects in Solid Inorganic Salts   163

Mkrtchyan, M. R., A. V. Bakh, and R. V. Dzhagatspanyan. Radiation-Chemical Chlorination of Benzene   169

Brodakin, M. A., Ye. T. Bureiko, and L. L. Kartasheva. ... (Czechoslovakia). Course of the Process of Benzene Oxidation in an Aqueous Solution Under the Action of Radiation   177

Karasheva, P. N. Komarov, and M. A. Proskurnin. Com-position Products of Phenol Faned During the Radiolysis of Benzene in an Aqueous Solution   183

Sharpatyy, V. A., and O. A. Golder. The Problem of the Phase Composition of the System H2O-NaNO3-NaOH at Low Temperatures   189

Orekhov, T. D., and A. A. Zanokhova. Sensitization of the Radiolytic Oxidation of Leucoform Dyes   194

Lab. of Radiation Chemistry, Ac. R., Physic-chemical Inst. in L. Ya. Karpov

5(3)

SOV/2o-126-4-29/62

AUTHORS: Nametkin, N. S.,   Topchiyev, A. V.,   Academician,
               Chernysheva, T. I.,   Kartasheva, L. I.

TITLE: Investigation of the Reaction of Addition of Trialkoxy-
               silanes to Olefines (Izucheniye reaktsii prisoyedineniya
               trialkoksisilanov k olefinam)

ABSTRACT: Up to now there are no data in publications on the possibility
               of the reaction mentioned in the title. On the contrary, the
               opinion was held (Ref 1) that it does not take place, for
               instance in the case of octene-1 (initiation of the reaction
               with acetyl peroxide and exposure to ultraviolet rays). Only
               in the patent of G. Wagner (Ref 2) such a possibility is
               pointed out. The authors succeeded in proving the reaction
               mentioned in the title. This was done by means of the examples
               of the reciprocal action of tri-ethoxysilane, tri-isopropoxy-
               silane, tributoxysilane, tri(secund.-butoxy)silane and tri(tert.-
               butoxy)silane with nonene-1 and decene-1 in the presence of
               platinum-hydrochloric acid and platinized coal. The pysico-
Card 1/2   chemical properties of the original trialkoxysilane are shown

SOV/20-126-4-29/62

Investigation of the Reaction of Addition of Trialkoxysilanes to Olefines

in table 1. The output amounted to 30-40%, except for tri(tert.-butoxy)silane. For the latter it was only 12%, due to the spatial restrictions. Table 2 shows the properties of the products. Decyl-tributoxysilane and nonyl-triisopropoxy-silane were also produced by means of the reciprocal action of nonyl-trichlorosilane and decyl-trichlorosilane with the corresponding alcohols. The identity of the substances produced in these two ways, is shown in table 3. This identity was also proved by means of the relative intensity and by means of the number of lines in the Raman spectra. The statement that in this case the addition takes place against Markovnikov's rule, is based on the comparison of the mentioned properties, or of the spectra. There are 3 tables and 3 references, 1 of which is Soviet.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR
(Institute for Petroleum-chemical Synthesis of the Academy of Sciences, USSR)

SUBMITTED: April 3, 1959

Card 2/2

S/020/61/136/001/031/037
B004/B056

AUTHORS: Kartasheva, L. I., Bulanovskaya, Z. S., Barelko, Ye. V.,
              Varshavskiy, Ya. M., and Proskurnin, M. A.

TITLE: Investigation of Radioactive Benzene Oxidation in Aqueous
              Solution by Means of Tagged Atoms

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 143-146

TEXT: The authors discuss the process of interaction between benzene and
the products of water radiolysis with reference to the results obtained in
Refs. 1 - 9. In discrepancy to the scheme of I. Stein and J. Weiss (Ref. 3)
assuming $C_6H_6 + OH^{\cdot} \longrightarrow C_6H_5^{\cdot} + H_2O$; $C_6H_6 + H^{\cdot} \longrightarrow C_6H_5 + H_2$ they regard direct
$OH^{\cdot}$ and $H^{\cdot}$ addition with $C_6H_7^{\cdot}$ and $C_6H_6OH^{\cdot}$ formation as being more probable.
The authors attempt to explain this problem by examining benzene radiolysis
in the presence of heavy water. If addition of $H^{\cdot}$ and $OH^{\cdot}$ to C_6H_6 occurs,
the forming insoluble substance is found to contain deuterium not only in
the OH groups but also in the C=H bonds in which no isotope exchange takes

Card 1/3

Investigation of Radioactive Benzene Oxidation   S/020/61/136/001/031/037
in Aqueous Solution by Means of Tagged Atoms   B004/B056

place unless under irradiation (Ref. 10). The residual content of C-bound
D in the substance was determined by "washing out" deuterium from the
OH groups by means of a solvent of ordinary hydrogen composition (ex-
change OD⇌OH). The ratio OD : CD expresses the probability of OH˙ and H˙
addition. Benzene and water containing 26.7 atom per cent were irradiated
from Co^{60}; γ-dose was 170 r/sec, time of irradiation 250 hours. The mixture
which previously was degassed by repeated freezing was irradiated in glass
ampoules. The white substance that had formed was centrifuged off and di-
vided into three portions after drying. In the first portion deuterium was
directly determined. The second portion was dissolved in alcohol and evapo-
rated for 14 times in order to remove the deuterium of the hydroxyl groups
by isotopic exchange. Subsequently, the deuterium content was determined.
The third portion was repeatedly treated with soda solution in order to
remove phenol traces and to attain isotopic exchange in the hydroxyl
groups. Furthermore, deuterium was also determined in the benzene which
had not undergone reaction. The following results were obtained: Table 1

Card 2/3

Investigation of Radioactive Benzene Oxidation   S/020/61/136/001/031/037
in Aqueous Solution by Means of Tagged Atoms   B004/B056

substance	D content (atom per cent)
solid substance, without treatment	11.2
solid substance, treated with alcohol	3.8
solid substance, treated with soda	3.8
benzene	0.0

The substance forming on radiolysis contains D in OH as well as in C=H
bond. The ratio OH : CH is about 2 : 1. Since no deuterium was found in
benzene it is concluded that no direct isotopic exchange takes place bet-
ween benzene and water. Deuterium enters benzene only by addition of the
radiolysis products of water. The present data confirm formation and
recombination of $C_6H_6D^{\cdot}$ and $C_6H_6OD^{\cdot}$ radicals. There are 1 table and

11 references: 7 Soviet, 2 British, and 1 Japanese.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Institute
of Physics and Chemistry imeri L. Ya. Karpov)

PRESENTED: July 16, 1960 by V. A. Kargin, Academician

SUBMITTED: July 11, 1960

Card 3/3

S/844/62/000/000/035/129
D214/D307

AUTHORS: Barelko, Ye. V., Kartasheva, L. I. and Proskurnin, M. A.
             (deceased)

TITLE: Kinetics of the initial stage of the radiochemical chaim
             oxidation of benzene

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-
             mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
             221-226

TEXT: Radiation-oxidation of C_6H_6 at elevated temperatures proceeds
by a chain reaction in which H_2O behaves as an initiator ($H_2O \rightsquigarrow \dot{H} +$
$+ \dot{O}H$). Source of the radiation was Co^{60}. Kinetic curves for the
process $C_6H_6 \rightarrow C_6H_5OH$ exhibit two distinct parts: the initial in-
ductive period and the autoacceleration period. The initial rate of
this process and the phenol yields increase with rising temperature
and with rising intensity of radiation. The radiolysis products

Card 1/2

Kinetics of the ...

S/844/62/000/000/035/129
D214/D307

$(\dot{H} + \dot{O}H)$ react with C_6H_6 to give secondary radicals $\dot{C}_6H_6OH$ and $\dot{C}_6H_6H$. In the presence of O_2 the secondary radicals formed are $C_6H_6\dot{O}HO_2$, $H\dot{O}_2$ and $\dot{C}_6H_6O_2H$. These radicals give phenol by disproportionation with a yield of 8 - 10 moles/100 ev. In the $C_6H_6-H_2O$ system and increase in $V_{H_2O}/V_{C_6H_6}$ (where V = volume) decreases the inductive period since less of the branching agent is extracted into the benzene phase. An initial addition of phenol to the H_2O phase further reduces the induction period; in dry benzene the added phenol is partially destroyed, which shows that H_2O is necessary for the progress of the reaction. There are 7 figures.

ASSOCIATION: Fiziko-khimicheskoy institut im. L. Ya. Karpova
               (Physico-Chemical Institute im. L. Ya. Karpov)

Card 2/2

PRITULA, N.A., KARTASHEVA, L.I.

Silicon-organic compounds with phenylene-carbon and thienyl-carbon chain links

Report to be submitted for the Second Dresden Symposium on Organic and non-silicate silicon chemistry, from 26-30 March 63, East Germany.

Institute for petrochemical syntheses of the Academy of Science of the USSR, Moscow.
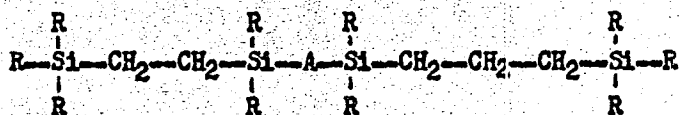
L 17099-63   EWP(j)/EPF(c)/EWT(m)/BDS   ASD   Pc-4/Pr-4   RM/WW/MAY
                                        S/062/63/000/004/010/022

AUTHOR: Nametkin, N.S., Topchiyev, A. V., Chernysheva, T.I., and   68
           Kartasheva, L.I.   67

TITLE: Some organosilicon compounds containing siloxano-carbon, silthiano-
           carbon and silazano-carbon chains

PERIODICAL: Akademiya nauk SSSR, Izvestiya. Otdeleniye khimicheskikh nauk,
             no. 4, 1963, 654-659

TEXT: A description is given of the synthesis of compounds having the
           following general formula

$$
\begin{array}{cccccc}
R & & R & R & & R \\
| & & | & | & & | \\
R-Si-CH_2-CH_2-Si-A-Si-CH_2-CH_2-CH_2-Si-R \\
| & & | & | & & | \\
R & & R & R & & R
\end{array}
$$

Card 1/2

L 17099-63   S/062/63/000/004/010/022

Some organosilicon compounds containing .....

where A = C; NH; S. These compounds were obtained from pentaalkyl (aryl)-
chlorodisilylpropanes which in turn were obtained by the addition of various
hydridesilanes to allylsilanes, in the presence of chloroplatinic acid. A
total of 15 compounds was synthesized. Physical and chemical properties of
the compounds are presented in 4 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute
              of Petrochemical Synthesis, Academy of Sciences USSR)

SUBMITTED: June 4, 1962

Card 2/2

KARTASHEVA L. I.

L 18755-63
WW/MAY   EWP(j)/EPF(c)/EWT(m)/BDS   ASD/ESD-3   Pc-4/Pr-4   RM/
                             G/0004/63/010/007/0390/0391
                                (S)   75
ACCESSION NR: AP3005759

AUTHOR: Tschernyschewa, T. I.; Nametkin, N. S.; Portula, N. A.; Kartaschewa, L. I.   73

TITLE: Organic silicon compounds with phenylene and thienylene chain links.
(Paper presented at the II. Dresden Synposium for Organic and Non-Silicate
Silicon Chemistry held from 26 to 30 March 1963. Translated from the Russian
by E. Hassenruck and J. A. Kohler, Leipzig)

SOURCE: Plaste und kautschuk, v. 10, no. 7, 1963, 390-391

TOPIC TAGS: polymer, organic silicon compound, phenylene, thienylene, silane

ABSTRACT: The following compounds were prepared: see Fig. 1 of Enclosure 1.
Alkenylsilanes were added to the H-Si-bonds. The synthesis of the dihydridpheny-
lenesilanes resulted from the Mg compounds of the p-dibrombenzene and alkylaryl-
hydrochlorsilanes; see Fig. 2 of Enclosure 1. The bromphenyldialkyl (aryl)
silanes as well as the bromthienylalkyl (aryl) silanes were used to prepare
p-phenylenevinylhydrosilanes and 2,5-vinylhydrothienylsilanes. Addition of the
vinyltrialkylsilanes to both Si-H-bonds of the dihydrophenylenesilanes gave

Card   1/4

L 18755-63
ACCESSION NR: AP3005759   2

yields of 35 to 70%. The properties of the addition products obtained are shown
in Table 1 of Enclosure 2. These addition took place in all cases at the last
carbon atom. An investigation of the polymerization of p-phenylenehydrovinylsil-
anes and thienylenehydrovinylsilanes has been initiated by the authors. Orig.
art. has: 1 table.

ASSOCIATION: Institut fur Petrochemische Synthese der Akademie der Wissenschaffen
der UdSSR, Moscow (Institute for Petrochemical Synthesis of the Academy of Sciences
of the USSR, Moscow)

SUBMITTED: 00   DATE ACQ: 14 Aug 63
                                                            ENCL: 02
SUB CODE: CH   NO REF SOV: 000
                                                            OTHER: 000

Card   2/4

NAMETKIN, N.S.; CHERNYSHEVA,T.I.; KARTASHEVA,L.I.

Organosilicon compounds with thienylene-carbon links. Dokl.
AN SSSR 156 no. 3:608-611 '64.   (MIRA 17:5)

1. Institut neftekhimicheskogo sinteza im. A.V.Topchiyeva
AN SSSR. 2. Chlen-korrespondent AN SSSR (for Nametkin).

ACCESSION NR: AP4038524   S/0020/64/156/003/0608/0611

AUTHOR: Nametkin, N. S. (Corresponding member); Cherny*sheva, T. I.;
Kartasheva, L. I.

TITLE: Organosilicon compounds with thienylene and hydrocarbon
links

SOURCE: AN SSSR. Doklady*, v. 156, no. 3, 1964, 608-611

TOPIC TAGS: silane, thiophene, thiophene derivative, silane
derivative

ABSTRACT: The study of the addition of silanes to unsaturated
compounds has been continued and organosilicon compounds containing
thienylene and hydrocarbon links in the backbone have been syn-
thesized. This work was done at the Institute of Petrochemical
Synthesis imeni A. V. Topchiyev, Academy of Sciences SSSR.
2,5-Bis(methylphenylsibyl)- (I; b_2, 200—205C) and 2,5-bis(ethyl-
phenylsilyl)-thiophene (II; b_2, 228—230C) were synthesized by
reacting 2,5-thiophenedimagnesium dibromide with the appropriate

Card 1/2